UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,315	03/17/2005	Mirko Appel	2002P1575WOUS	4513

7590 01/16/2008

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
BARBEE, MANUEL L	
ART UNIT	**PAPER NUMBER**
2857	

MAIL DATE	DELIVERY MODE
01/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/528,315	APPEL ET AL.	
	Examiner	Art Unit	
	Manuel L. Barbee	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,210,526 to Imperiali (Imperiali) in view of US Patent Application Publication 2002/0183971 to Wegerich et al. (Wegerich) and US Patent No. 4,819,658 to Kolodner (Kolodner).

With regard to monitoring a plurality of distinct machinery in a technical installation including non-rotating machinery to acquire a number of temperature values and temperature information to account for interactions between at least some of the distinct types of machinery and an analysis module and deriving a temperature pattern from a number of temperature values and temperature information related to a technical installation, as shown in claims 7 and 10, Imperiali teaches sensing infrared emission with a thermocamera of reactors (col. 2, lines 5-15; col. 1, lines 13-17). Since the reactors are part of the same system, and because fluid flows between components of the energy plant, temperature would reflect interaction between reactors of the energy plant (col. 3, lines 9-16). Each reactor corresponds to a distinct type of machine and temperature measurement corresponds to a measurement that is configured to account for interactions that occur between at least some of the distinct types of machinery in

the technical installation. With regard to comparing the temperature pattern to a known and stored temperature pattern, as shown in claims 7 and 10, Imperiali teaches comparing an image from the thermocamera with a stored image (col. 7, lines 14-39). With regard to classifying the current operation, as shown in claims 7 and 10, Imperiali teaches an alarm signal when the operation exceeds a threshold (col. 7, line 40 - col. 8, line 20). With regard to the technical installation being of a plant for generating electric power, as shown in claims 7 and 10, Imperiali teaches monitoring nuclear plants for producing electric energy (col. 1, lines 13-17).

Imperiali does not teach comparing to stored failure temperature patterns, as shown in claims 7 and 10. Wegerich teaches comparing to failure modes or signatures (pars. 85 and 86). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plant monitor, as taught by Imperiali, to include failure modes and signatures, as taught by Wegerich, because then the diagnosis and monitoring would have been easily adapted to changing uses of the machine (Wegerich, par. 9).

Imperiali does not teach monitoring rotating machinery, as shown in claims 7 and 10. Kolodner teaches measuring the temperature profile of a generator (col. 1, lines 13-18, 39-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plant monitor, as taught by Imperiali, to include monitoring a generator, as taught by Kolodner, because then faults in the generator would have been detected (Kolodner, col. 1, lines 39-49).

With regard to storing the present operating situation and related temperature pattern for future comparison, as shown in claims 8 and 11, Imperiali teaches storing a further reference image (col. 7, lines 34-39).

With regard to an infrared camera, as shown in claims 9 and 12, Imperiali teaches an infrared camera (col. 2, lines 5, 6).

Imperiali does not teach a database, as shown in claim 13. Wegerich teaches a database (Fig. 1, par. 33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the plant monitor, as taught by Imperiali, to include a database, as taught by Wegerich, because then the diagnosis and monitoring would have been easily adapted to changing uses of the machine (Wegerich, par. 9).

Response to Arguments

3. Applicant's arguments filed 2 November 2007 have been fully considered but they are not persuasive. Applicant states that the Imperiali/Wegerich/Kolodner does not teach or suggest monitoring configured to account for interactions that occur between at least some of the distinct types of machinery in the installation. However, Imperiali teaches sensing infrared emission with a thermocamera of reactors (col. 2, lines 5-15; col. 1, lines 13-17). Since the reactors are part of the same system, and because fluid flows between components of the energy plant, temperature would reflect interaction between reactors of the energy plant (col. 3, lines 9-16). Each reactor corresponds to a distinct type of machine and temperature measurement corresponds to a measurement that is configured to account for interactions that occur between at least some of the distinct types of machinery in the technical installation.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 571-272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Manuel L. Barbee
Examiner
Art Unit 2857

mlb
January 14, 2008